Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Recombination of Three Dipoles into Weakly Bound Dimers
SETH RITTENHOUSE, ITAMP, Harvard-Smithsonian Center for Astrophysics, CHRISTOPHER TICKNOR, Los Alamos National Labratory — Three-body recombination has proven to be an important component in understanding the lifetime of ultra-cold atomic gases. Similarly, in the absence of two-body loss processes, recombination of three bosonic dipoles is the main pathway for loss in an ultracold gas of dipolar molecules. We present new results predicting universal behavior in this process for positive s-wave scattering length as well as the scaling behavior at large scattering length. Corrections due to the presence of the long-range anisotropic dipolar interaction are included.

Seth Rittenhouse
ITAMP, Harvard-Smithsonian Center for Astrophysics

Date submitted: 22 Jan 2010 Electronic form version 1.4